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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,278	06/29/2001	Gilbert Lavielle	ADIR360/lw	7985

7590

07/08/2002

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EXAMINER

BERNHARDT, EMILY B

ART UNIT	PAPER NUMBER
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1624

DATE MAILED: 07/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/896,278

Applicant(s)

Lavielle et al.

Examiner

Emily Bernhardt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-34 is/are pending in the application.
- 4a) Of the above, claim(s) 30 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-29 and 32-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims 18-28,30,31,33,34, drawn to compounds,compositions and uses where G=azoles, classified in class 548, subclasses such as 333.1,343.5,354.1;class 514 subclasses 398,399,401.
- II. Claims 18-29,32-34, drawn to compounds,compositions and uses where G=azines, classified in class 544, subclasses 377 and 393 and class 546, various subclasses; class 514 subclasses such as 254.11, 254.08 and 255.03.

In addition to an election of one of the above groups applicants must also elect a single species embrative of that group.

The inventions are distinct, each from the other because of the following reasons: Groups I-II are drawn to compounds having different cores with various additional rings attached at both ends which are separately classified,and would be expected to raise different issues of patentability in view of the structural dissimilarity for compounds of I vs II as a whole. Each can support a patent as the compounds of each group are capable of being utilized alone not in combination

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with other members listed in the Markush group. Note the art cited below directed to subject matter in part of group I.

During a telephone conversation with Mr. Sage on 1/3/02 a provisional election was made with right of traverse to prosecute the invention of II, claims 18-29, 32-34 and in particular species of eg. 6 or 16 which are similar to each other. Affirmation of this election must be made by applicant in replying to this Office action. Claims 30-31 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claims 18-28 and 33-34 which link both inventions will only be examined with respect to the elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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The abstract of the disclosure is objected to because the structural makeup of G should be indicated. Correction is required. See MPEP § 608.01(b).

Claims 18-29,32-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. In the definition of R variables further forming rings what kind of neutral 7-membered rings are aromatic?
2. In the species of claims 29 and 32 where are the asymmetric sites that can result in optical isomerism? Note that enantiomers, diastereomers are embraced.
3. Claim 33 is of indeterminate scope. Defining a disease(s) by its (their) underlying cause renders the scope of intended uses indeterminate since the claim language may read on diseases not yet known to be caused by or affected by such action or in ways not yet understood. Additionally, determining whether a given disease responds or not to antagonism at one or more receptor sites involves much experimentation since a negative response from one patient does not mean the drug isn't useful as no drug has 100% effectiveness. Thus what "success rate" determines if a particular inhibitor is effective and how many patients (and dosage regimens)

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need to be tested? The test for determining compliance with 35 USC 112, par.two is whether applicants have clearly defined "their" invention not what may be discovered by future research as this type of claim language clearly requires.

Claims 18-28,33-34 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

1.Specification is not adequately enabled for the scope of compounds claimed which have a variety of heteroaryl groups on both piperazine and piperidine rings and can be further fused with hetero rings at any two R locations and at X1/X2 with O or N-containing rings. Compounds made and tested are always piperazines with T3 as methyl or benzodioxinyl and when fused at R or L groups, an indolyl or benz-fused indole. There is no reasonable basis for assuming that the myriad of compounds not made much less tested embraced by the claims will all share the same physiological properties since they are so structurally dissimilar as to be chemically non-equivalent and there is no basis in the prior art for assuming the same. Note In re Surrey 151 USPQ 724 regarding sufficiency of disclosure for a Markush group.

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Also see MPEP 2164.03 for enablement requirements in cases directed to structure-sensitive arts such as the pharmaceutical art especially where receptor binding is involved.

2. Applicants provide no definitive evidence to correlate the many disease states being claimed which from a reading of the specification includes cognitive disorders, all forms of sexual dysfunction, Parkinson's disease, schizophrenia as treatable based on the ability of instant compounds to bind to two receptor sites, namely at the alpha-2 receptor and 5HT2c receptor. While treating anxiety, depression has been strongly linked to 5HT2c antagonism (see Gaster especially page 26, provided with this action), uses such as sexual dysfunction have not nor have Parkinson's Disease and cognitive. See Brefel-Courbon, a reference cited in the specification on p.2. See concluding remarks therein as well as Hoffmann (also provided by the examiner) on p.135 regarding the lack of clinical applications for alpha 2-adrenergic receptor antagonists.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18,19,21-25,33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Duckworth (US'080). Duckworth discloses compounds within the instant scope for uses also embraced herein. See species in column 2, lines 32-35 and list of uses urged treatable in column 6.

Claims 18,19,23-25,33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaster (WO'885). Gaster also discloses compounds within the instant scope. See examples such as 1 and 6. Also several uses embraced herein are also taught based on serotonin receptor binding at one or more sites. See column 6. A copy of the US equivalent is also being provided.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gaster. The teachings of Gaster as discussed in the above 102 rejection is incorporated herein. The subject matter in claim 21 differs from eg.6 only in point of attachment of urea group to naphthyl, i.e. at the alpha vs instant beta position. Compounds that are position isomers are not considered patentably distinct absent evidence of superior, unexpected results. See In re Crounse 150



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USPQ 554;Ex parte Engelhardt 208 USPQ 343 regarding position isomerism. Thus it would have been obvious to one skilled in the art at the time the invention was made to expect instant isomer of eg.6 to also possess the uses taught by the applied art in view of the close structural similarity outlined above.

**Any inquiry concerning this communication should be directed to Emily Bernhardt at telephone number (703) 308-4714.**

**A facsimile center has been established for Group 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier numbers for accessing the facsimile machine are (703) 308-4556 or (703) 305-3592.**

*Emily Bernhardt*  
**EMILY BERNHARDT**

**PRIMARY EXAMINER**

**GROUP 1600**